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(21) International Application Number: PCT/US00/13292 (22) International Filing Date: 12 May 2000 (12.05.00) (30) Priority Data: 60/134,286 14 May 1999 (14.05.99) US (71) Applicant (for all designated States except US): NEW ENGLAND BIOLABS, INC. [US/US]; 32 Tozer Road, Beverly, MA 01915 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): SANDMAN, Karen, E. [US/US]; 33 Shawnee Road, Arlington, MA 02476 (US). NOREN, Christopher, J. [US/US]; 39 Adams Road, Boxford, MA 01921 (US). (74) Agent: WILLIAMS, Gregory, D.; New England Biolabs, Inc., 32 Tozer Road, Beverly, MA 01915 (US).		(81) Designated States: JP, US, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i>
(54) Title: SURFACE DISPLAY OF SELENOCYSTEINE-CONTAINING PEPTIDES (57) Abstract The naturally-occurring amino acid selenocysteine (SEC) is incorporated uniquely and specifically in the context of a polypeptide displayed on the surface of an amplifiable genetic particle (phage, cell or spore) in response to incorporation signals engineered in the encoding DNA. In addition to conferring the unique activities of the selenol group to the chemistry of the displayed peptide, Sec also provides a unique handle for specific chemical modification of the display peptide. In addition to increasing the palette of available residues in a random peptide library to 21 possibilities, present invention also provides a means of tethering virtually any desired chemical functionality to the incorporated Sec.		

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